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Claims:

For the convenience of the Examiner, a copy of the Claims as originally filed is provided below.

1. (original) A method for manipulating data in a processor, the method comprising: performing a conditional shift operation on an index register based on the condition of a carry flag, the condition of the carry flag having been set by a previous arithmetic operation; and performing an indexed load operation using an index register.

2. (original) The method for manipulating data in a processor according to claim 1, further comprising: transferring data from an input buffer to a packet task manager; dispatching the data from the packet task manager to an analysis machine; classifying the data in the analysis machine; and implementing a binary search in the analysis machine.

3. (original) The method for manipulating data in a processor according to claim 1, further comprising modifying and forwarding the data in a packet manipulator.

4. (original) The method for manipulating data in a processor according to claim 2, further comprising transferring the data after modifying and forwarding to an output buffer.

5. (original) The method for manipulating data in a processor according to claim 1, further comprising processing data at a rate of at least 10 Gbs.

6. (original) A processor having an instruction set associated therewith, the instruction set including a load-shift carry instruction that, when executed by the processor causes the processor to: perform a conditional shift operation on an index register based on the condition of a carry flag, the condition of the carry flag having been set by a previous arithmetic operation; and

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perform an indexed load operation using an index register.

7. (original) A processor according to claim 6, wherein the processor comprises: an analysis machine having multiple pipelines, wherein one pipeline is dedicated to directly manipulating individual data bits of a bit field; a packet task manager operationally connected to said analysis machine; and, a packet manipulator operationally connected to said analysis machine.

8. (original) The processor according to claim 7, wherein said analysis machine is multi-threaded.

9. (original) The processor according to claim 7, wherein said analysis machine has 32 threads.

10. (original) The processor according to claim 7, further comprising: a packet task manager operationally connected to said analysis machine; a packet manipulator operationally connected to said analysis machine; and a global access bus including a master request bus and a slave request bus separated from each other and pipelined.

11. (original) The processor according to claim 7, further comprising: an external memory engine operationally connected to said analysis machine; and a hash engine operationally connected to said analysis machine.

12. (original) The processor according to claim 10, further comprising: packet input global access bus software code used for flow of data packet information from a flexible input data buffer to an analysis machine.

13. (original) The processor according to claim 10, further comprising: packet data global access bus software code used for flow of packet data between a flexible data input bus and a packet manipulator.

14. (original) The processor according to claim 10, further comprising: statistics data global access bus software code used for connection of an analysis machine to a packet manipulator.

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15. (original) The processor according to claim 10, further comprising: private data global access bus software code used for connection of an analysis machine to an internal memory engine submodule.

16. (original) The processor according to claim 10, further comprising: lookup global access bus software code used for connection of an analysis machine to an internal memory engine submodule.

17. (original) The processor according to claim 10, further comprising: results global access bus software code used for providing flexible access to an external memory.

18. (original) The processor according to claim 10, further comprising: results global access bus software code used for providing flexible access to an external memory.

19. (original) The processor according to claim 10, further comprising: a bidirectional access port operationally connected to said analysis machine; a flexible data input buffer operationally connected to said analysis machine; and a flexible data output buffer operationally connected to said analysis machine.